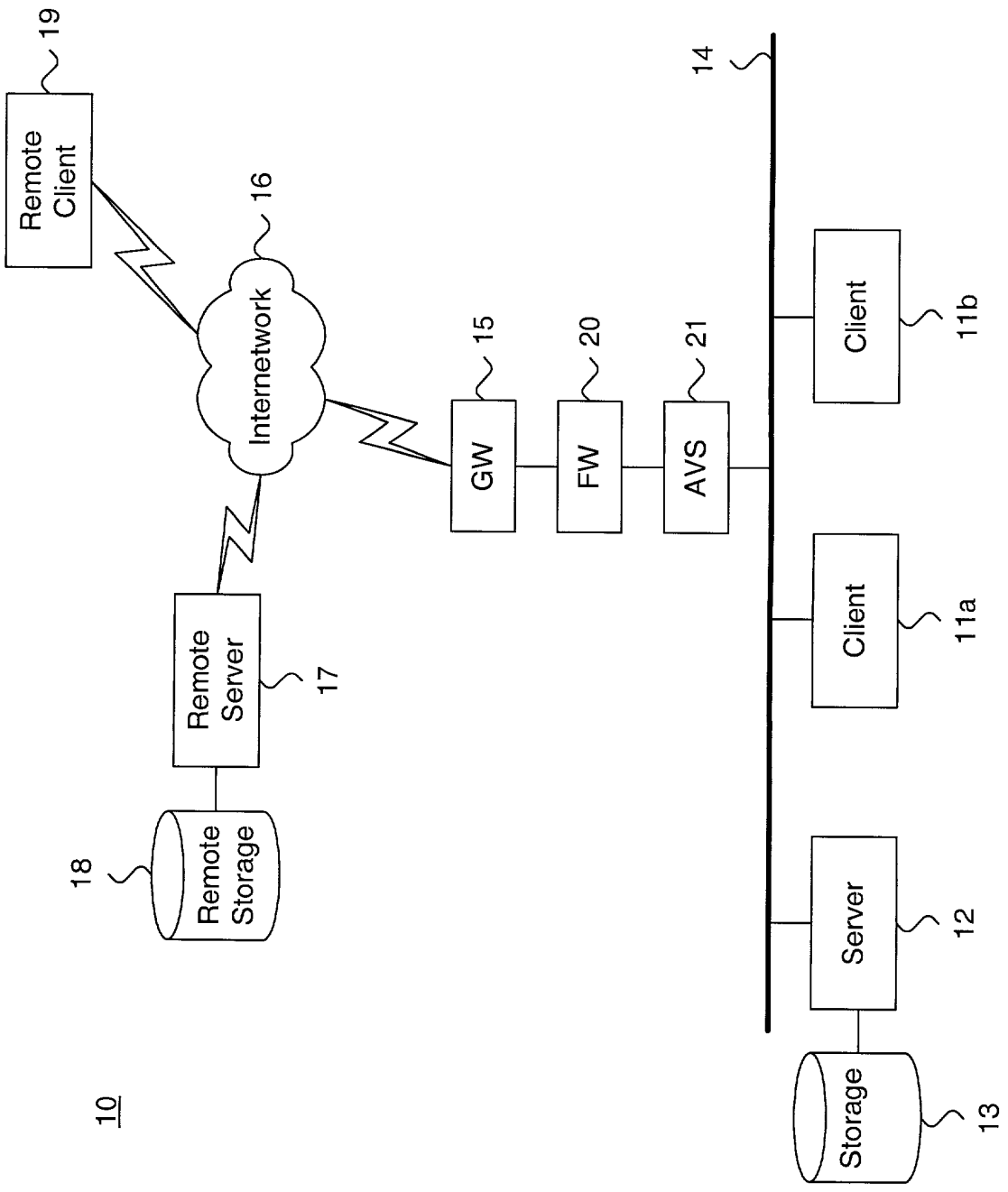

10
Remote Client
19
Internetwork
16
Remote Server
17
Remote Storage
18
GW
15
FW
20
AVS
21
14
Client
11b
Client
11a
Server
12
Storage
13

Figure 1.

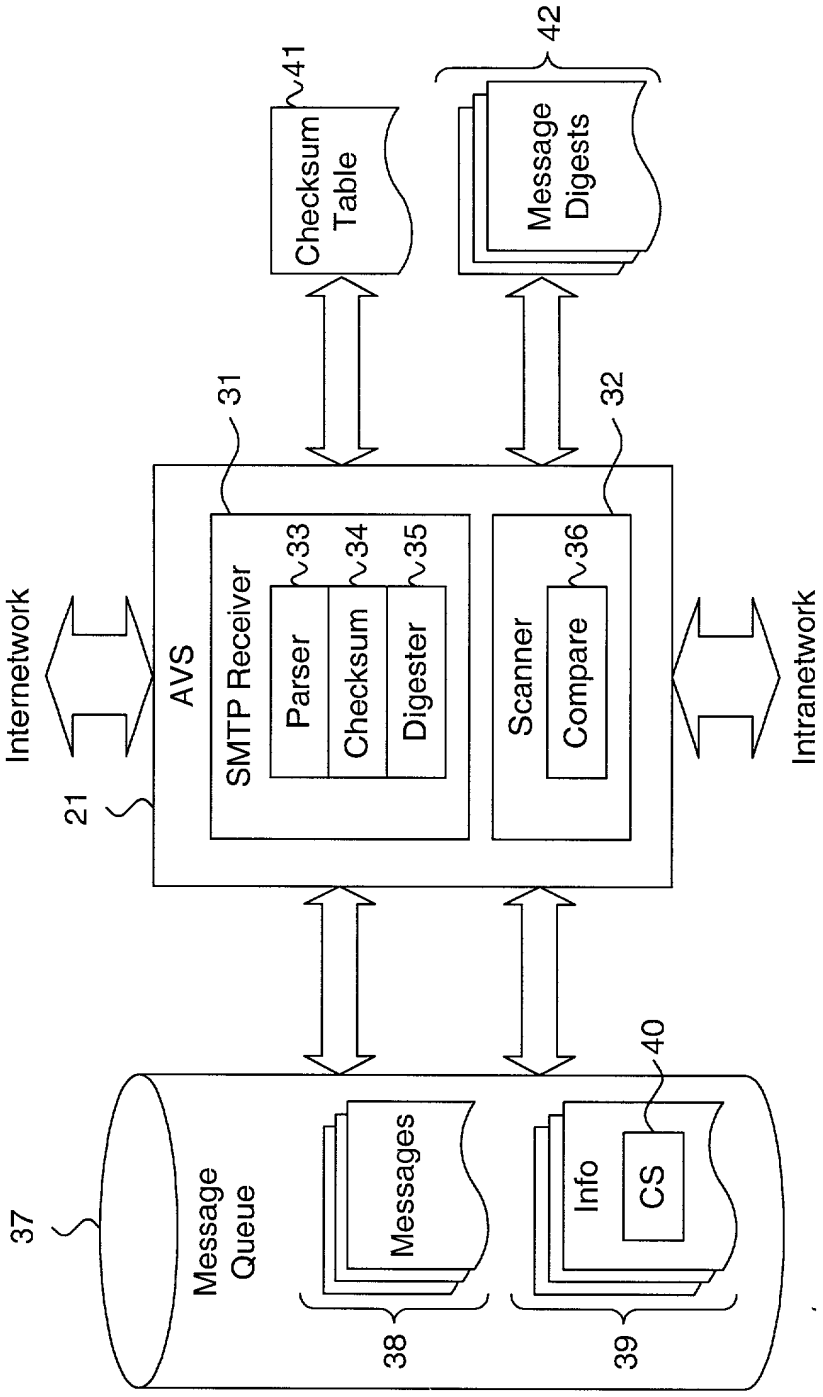

30
Internetwork
21
AVS
31
SMTP Receiver
Parser
33
Checksum
34
Digester
35
Checksum Table
41
Message Digests
42
32
Scanner
Compare
36
Intranetwork
37
Message Queue
Messages
38
Info
CS
40
39

Figure 2.

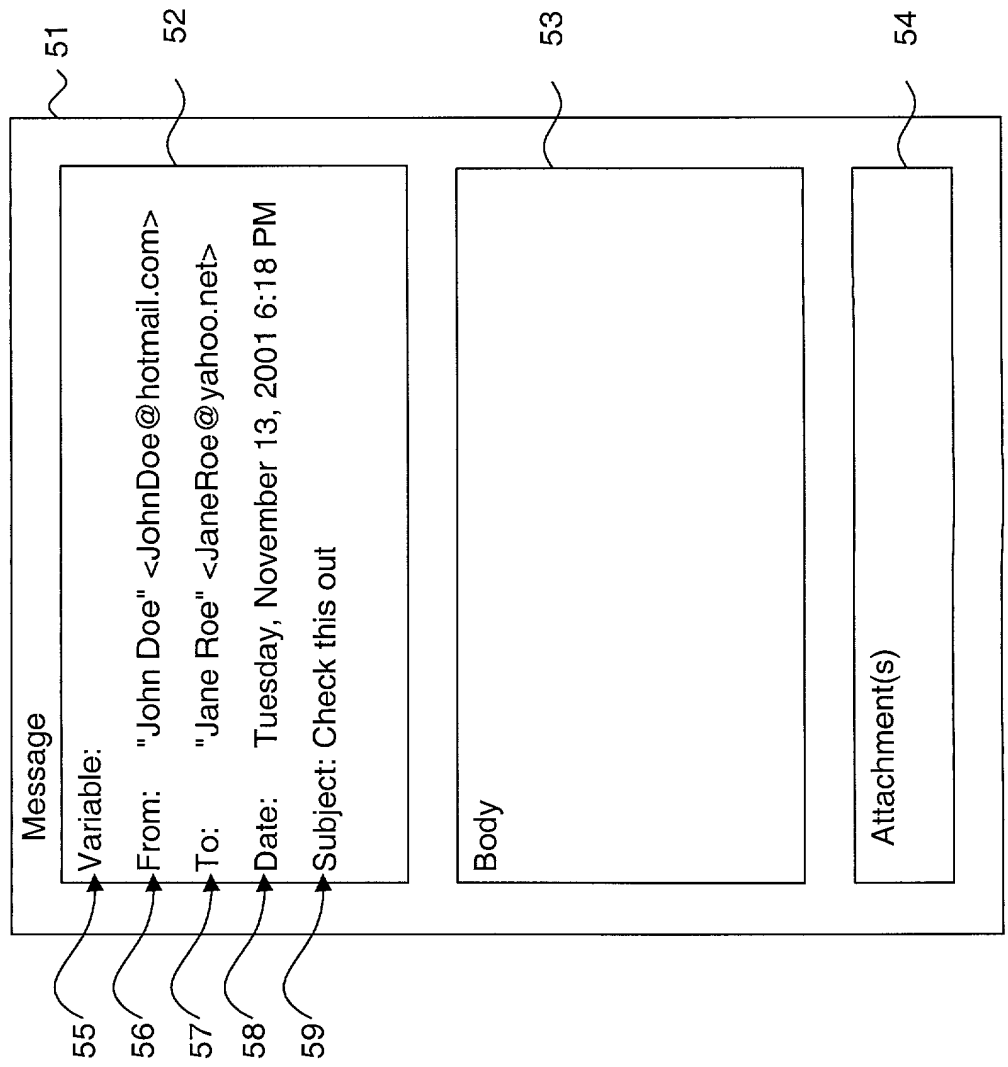

50
51
52
53
54
Message
Variable:
From: "John Doe" <JohnDoe@hotmail.com>
To: "Jane Roe" <JaneRoe@yahoo.net>
Date: Tuesday, November 13, 2001 6:18 PM
Subject: Check this out
Body
Attachment(s)
55
56
57
58
59

Figure 3.

Figure 4.

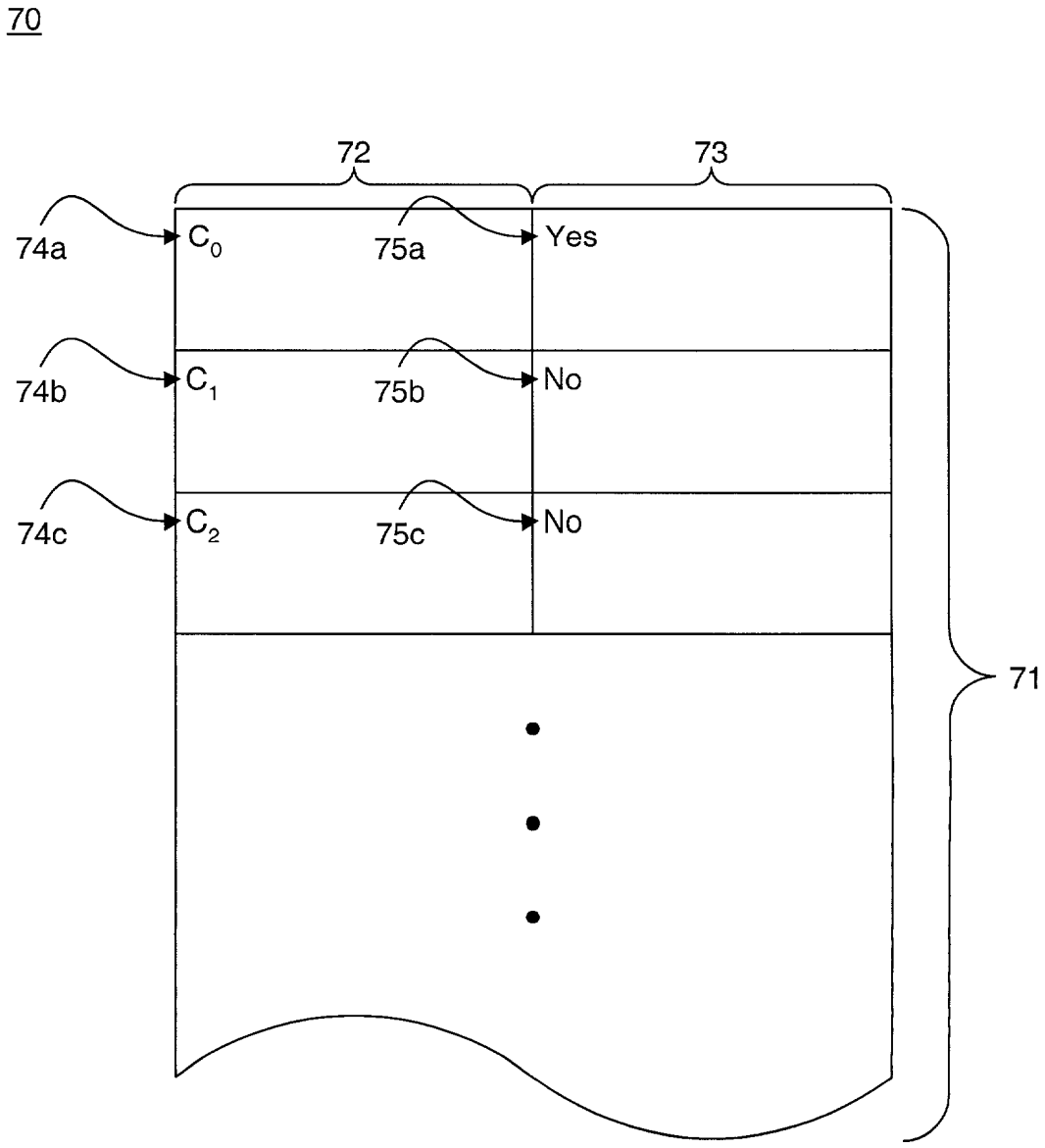


Figure 5.

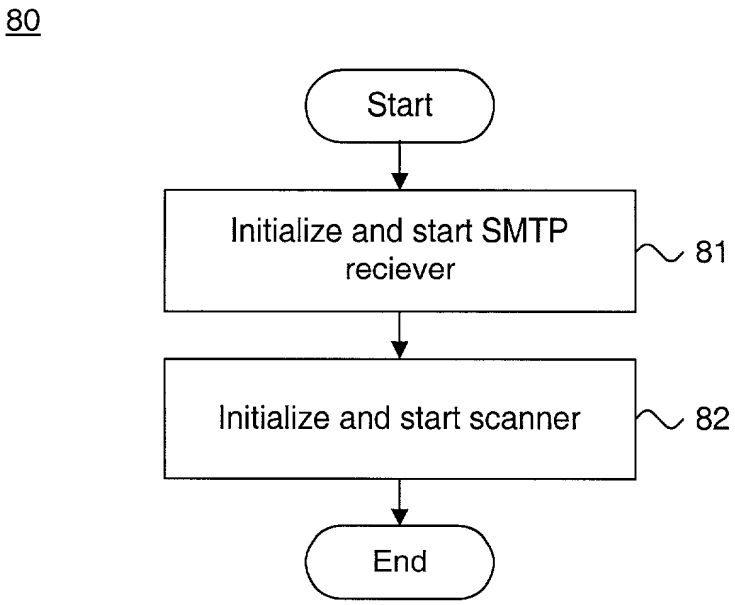

80
Start
Initialize and start SMTP reciever
81
Initialize and start scanner
82
End

Figure 6.

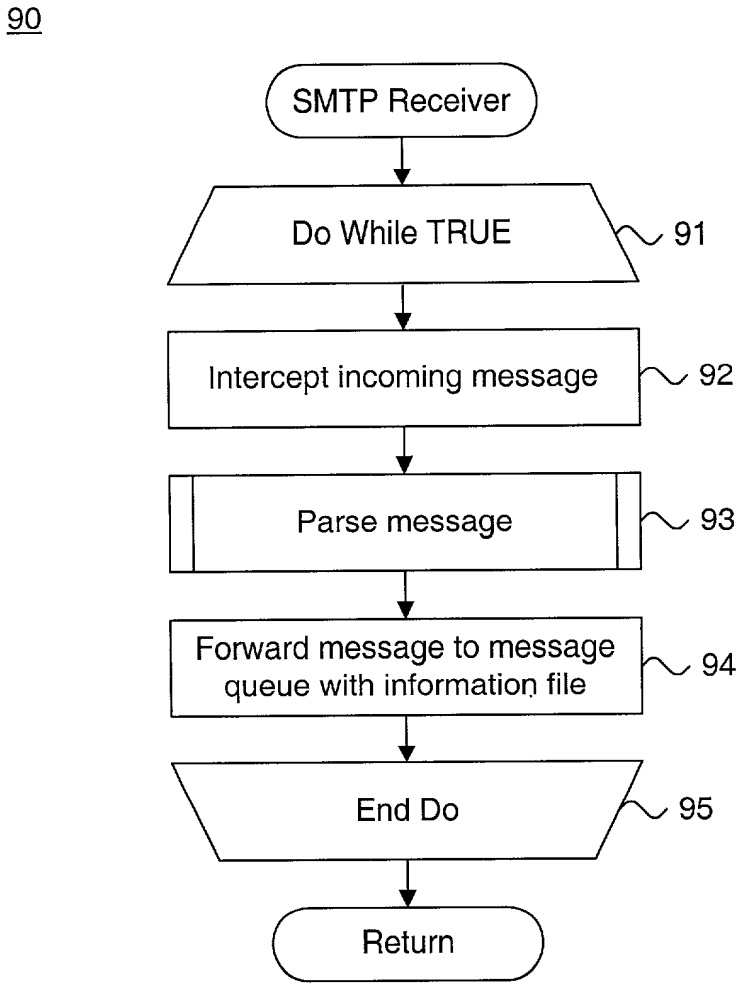

90
SMTP Receiver
Do While TRUE
91
Intercept incoming message
92
Parse message
93
Forward message to message queue with information file
94
End Do
95
Return

Figure 7.

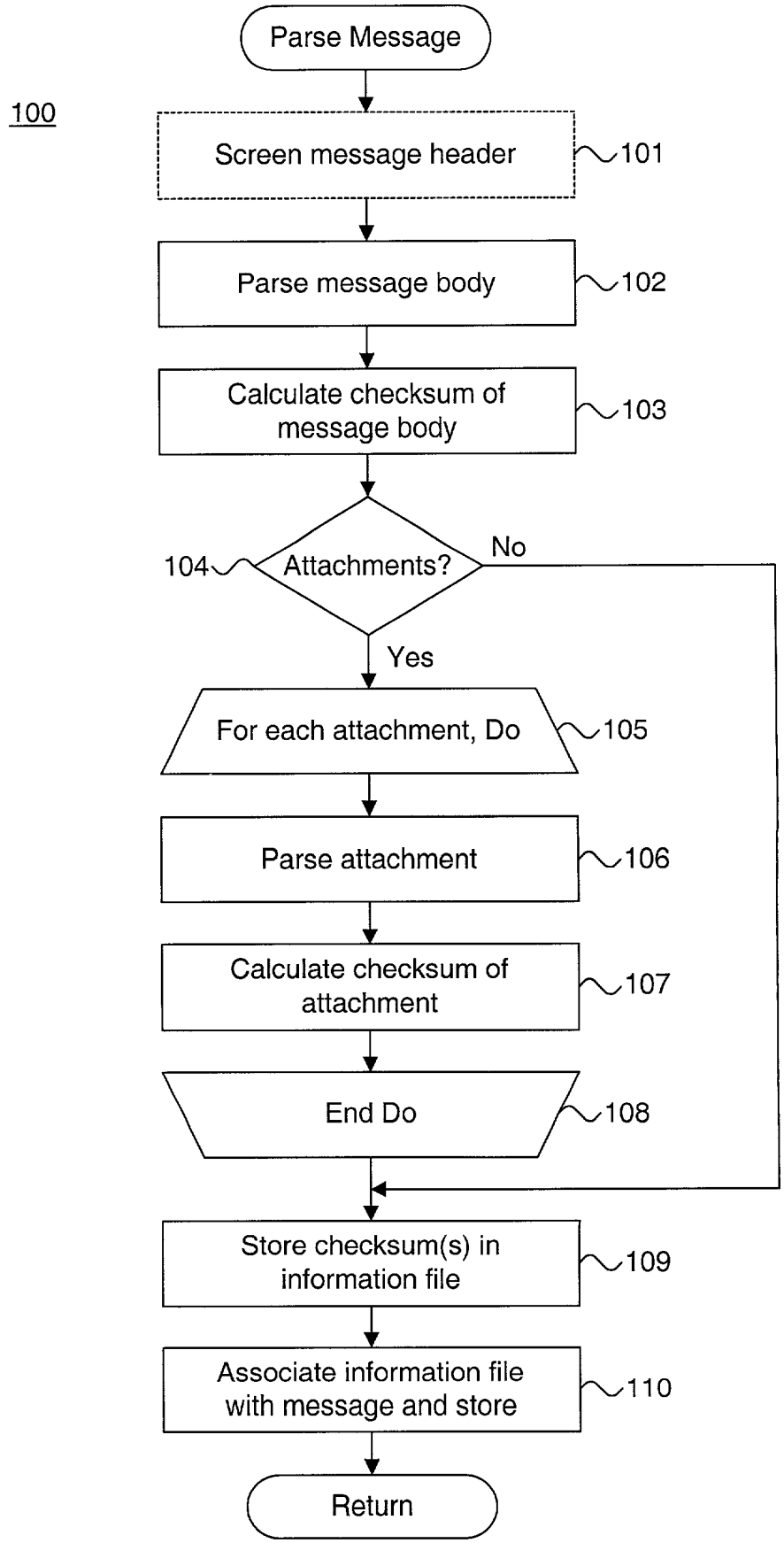
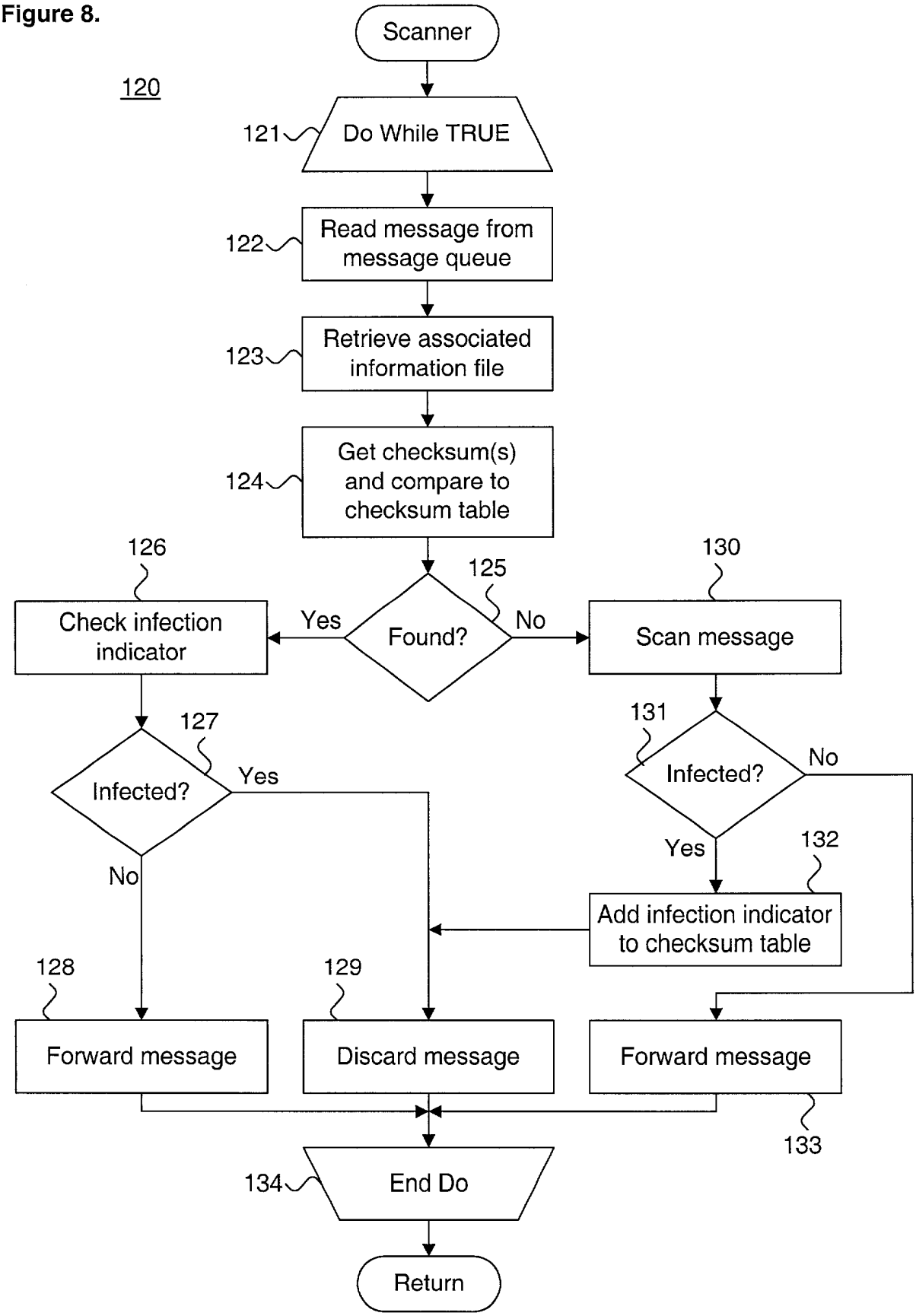

100
Parse Message
Screen message header
101
Parse message body
102
Calculate checksum of message body
103
104
Attachments?
No
Yes
For each attachment, Do
105
Parse attachment
106
Calculate checksum of attachment
107
End Do
108
Store checksum(s) in information file
109
Associate information file with message and store
110
Return

Figure 8.


Scanner
120
121
Do While TRUE
122
Read message from message queue
123
Retrieve associated information file
124
Get checksum(s) and compare to checksum table
126
125
130
Check infection indicator
Yes
Found?
No
Scan message
127
131
Infected?
Yes
No
Infected?
No
Yes
132
Add infection indicator to checksum table
128
129
Forward message
Discard message
Forward message
133
134
End Do
Return